CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER __

WASTE DISCHARGE REQUIREMENTS

FOR
CITY OF MENDOTA
MENDOTA WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. On 3 July 2012, the City of Mendota submitted a Report of Waste Discharge (RWD) to apply for revised Waste Discharge Requirements (WDRs) for an existing publicly owned wastewater treatment facility (WWTF), which serves the Mendota community and a federal prison. A revised RWD and additional information to complete the RWD was submitted on 9 July 2015, 6 November 2015, and 3 December 2015, and 11 December 2015.

2. The City of Mendota (hereafter "Discharger") owns and operates the WWTF and is responsible for compliance with these Waste Discharge Requirements (WDRs).

3. The WWTF is located along Bass Avenue about one mile northeast of the City of Mendota (Section 29, T13S, R15E, MDB&M). The WWTF occupies Assessor's Parcel Numbers (APN) 013-050-58, 013-050-59, 013-050-60, 013-050-64, 013-050-66, 013-050-68, 013-050-69, 013-050-71, 013-050-72, 013-050-73, 013-050-75, 013-050-77, and 013-050-78 as shown on Attachment A, which is attached hereto and made part of this Order by reference.

4. WDRs Order 91-192, adopted by the Central Valley Water Board on 6 September 1991, and Cease and Desist Order (CDO) R5-2002-0048, adopted by the Central Valley Water Board on 26 April 2002, prescribe discharge requirements for the WWTF.

5. Order 91-192 establishes water quality limits and allows an average dry weather flow up to 1.24 million gallons per day (mgd). CDO R5-2002-0048 required the Discharger to implement salinity source control, wastewater treatment capacity improvements, and hydraulic capacity improvements. The Discharger has upgraded the WWTF and reduced effluent salinity to comply with the CDO. Therefore, WDR Order 91-192 and CDO R5-2002-0048 will be rescinded and replaced with this Order.

Existing Facility and Discharge

6. The Mendota WWTF treats domestic wastewater from the City of Mendota and a nearby Federal Correctional Institution. The City has a population of approximately 11,000 residents and the prison has approximately 1,100 inmates and 300 staff. The WWTF was originally constructed in 1972 and has been incrementally modified over the years. The WWTF is located adjacent to the Fresno Slough near the convergence with the San Joaquin River.

7. Since 2011, the City has been working to reduce obvious contributions to inflow and infiltration (I&I). These efforts have included closing open utility vault covers, particularly in low-lying areas subject to storm flooding, and repair of old utility vault covers potentially subject to upward groundwater intrusion.

8. The WWTF previously consisted of three unlined treatment ponds (Ponds 1 through 3) run in series and four percolation/evaporation disposal ponds (Ponds 4 through 7). The disposal ponds have an estimated percolation rate of approximately 0.01 feet per day. The three treatment ponds were used until 2011, when the WWTF improvements project was completed as described below. From 2011 through 2015, the Discharger used the abandoned treatment ponds for emergency disposal. The Discharger was not able to remove the sludge from Ponds 2 and 3 until 2015, at which point they were designated as disposal ponds. This Order establishes a time schedule to remove sludge from Pond 1.

9. In 2006, the Discharger submitted a Preliminary Engineer's Report that evaluated alternative treatment designs to comply with CDO R5-2002-0048 and improve the WWTF's treatment and hydraulic capacity. Based on the evaluation, the Discharger proposed a WWTF improvements project that involved decommissioning the old treatment ponds, relocating and constructing a new headworks, constructing a larger treatment pond system further from the Fresno Slough consisting of aerated primary treatment ponds and secondary facultative ponds, removing sludge from the decommissioned treatment ponds for use as disposal ponds, rehabilitating existing disposal ponds to improve percolation rates, and constructing new disposal ponds with better percolation rates.

10. From 2010 through 2012, the Discharger completed construction of the proposed WWTF improvements project as available funding allowed. The project was completed as discussed below. A site plan is shown on Attachment B, which is attached hereto and made part of this Order by reference.

    a. Construction included two aerated primary treatment ponds, T1 and T2, and two secondary facultative treatment ponds, F1 and F2. Ponds T1 and F1 are run in series as are ponds T2 and F2. Additional funds were not available to complete the planned construction of two additional aerated primary treatment ponds, T3 and T4, and two additional secondary facultative treatment ponds, F3 and F4.

    b. To increase hydraulic disposal capacity, the Discharger proposed constructing new disposal ponds and draining, cleaning, and deepening the existing disposal

ponds to improve percolation rates. In 2006, the Discharger proposed a location for new disposal ponds further from the river where an identified underlying sand lens was anticipated to have a higher percolation rate than the existing disposal ponds. In 2011, the Discharger constructed three new disposal ponds (Ponds 8 through 10) in the proposed location and to a depth of the sand lens. However, within four weeks of filling the new disposal ponds with wastewater, the observed percolation rate fell from 0.5 feet per day to less than 0.07 feet per day, which has remained steady. It is unclear whether the percolation rate was affected by clogging or whether the available void space was simply filled.

c. Efforts to improve the percolation rates of existing disposal Ponds 4 through 7 were not successful during the project timeline due to wet weather conditions, funding availability, and project deadlines.

d. In 2012, the Discharger attempted another effort to obtain better percolation by constructing disposal Pond 11 in the same sand lens as Ponds 8, 9, and 10, but Pond 11 also exhibits the same percolation rate of 0.07 feet per day. Currently, an economically feasible solution to improve the percolation rate does not exist.

11. The flow schematic of the completed WWTF improvement project is shown on Attachment C, which is attached hereto and made part of this Order by reference. After completing the WWTF improvement project in 2012, the WWTF had an influent pumping capacity of nearly 2.5 mgd and a treatment capacity of 1.35 mgd. However, poor percolation of the disposal ponds limited the disposal capacity to 0.86 mgd.

12. From 2010 to 2014, the disposal capacity was not sufficient to handle influent flows, which averaged .970 mgd over the five year period and ranged from 0.816 mgd to 1.181 mgd as a monthly average. As a result, the Discharger used unpermitted land areas for wastewater disposal.

13. In 2015, the Discharger cleaned the sludge out of decommissioned treatment Ponds 1 and 2 for disposal use. The Discharger also began discharging wastewater to the bermed land area designated for the future construction of treatment ponds T3, T4, F3, and F4. This Order names this area Pond 12. With the addition of disposal Ponds 1, 2, and 12, the WWTF currently has an annual average hydraulic disposal capacity of 1.28 mgd. This Order requires the Discharger to submit a *Pond Construction Report* providing the as-built dimensions for Pond 12.

14. The following table summarizes the yearly average influent and effluent wastewater character from 2011 through 2015.

Constituent	**Units**	**2015 Yearly Average (Range of Yearly Averages from 2011 through 2014)**	
		Influent Wastewater	**Effluent Wastewater**
BOD_5	mg/L	290 (170 – 250)	25 (10 – 30)[a]
Nitrate (as N)	mg/L	n/a	n/a (4.4 – 10.8)[b]
EC	µmhos/cm	1,520 (1,630 – 1,980)	1,180 (1,510 – 1,780)[a]
TDS	mg/L	n/a	n/a (1,040 – 1,540)[b]
Chloride	mg/L	n/a	n/a (260 -405)[b]

Constituent	Units	2015 Yearly Average (Range of Yearly Averages from 2011 through 2014)	
		Influent Wastewater	Effluent Wastewater
Sulfate	mg/L	n/a	n/a (210 – 360)[b]
Iron	mg/L	n/a	n/a (0.03 – 1.50)[b]
Manganese	mg/L	n/a	n/a (0.01 – 0.07)[b]

[a] Samples taken from wastewater treatment pond effluent.

[b] Samples taken from Pond 10, typically the first disposal pond to be filled after wastewater treatment.

Abbreviations: BOD_5, five-day biological oxygen demand; EC, electrical conductivity; TDS, total dissolved solids; n/a, 2015 yearly average not available

15. With respect to BOD, the Discharger's WWTF improvement project has increased effluent quality and treatment reliability. The Discharger has reduced effluent salinity as measured by EC by completing the following projects. In 2004, the Discharger installed three new water supply wells to improve source water quality. Since 2011, the source water EC has typically been less than 700 µmhos/cm as a yearly average. In 2011, the Discharger initiated a resident outreach salinity education program. As a result of these efforts, effluent EC has been reduced from around 2,500 µmhos/cm to 1,500 µmhos/cm on average. Notably, the effluent EC concentration is less than the influent EC concentration, which indicates that evapoconcentration is not playing a considerable role in the high effluent concentrations. This also may indicate that the wastewater contains a considerable fraction of EC that is biodegradable, which is removed by the improved wastewater treatment pond system.

16. The source water based effluent limit, calculated as source water EC plus 500 µmhos/cm, ranges from 940 to1,370 µmhos/cm. It was not until late 2014 that the discharge was able to come into compliance with the source water based EC effluent limit. The discharge is not in compliance with the maximum effluent EC limit of 1,000 µmhos/cm.

17. The WWTF does not incorporate a dedicated biosolids processing, drying, or handling facility. Biosolids accumulate in the primary treatment ponds T1 and T2, and to a lesser extent in the facultative ponds F1 and F2. All four ponds have a depth of 14.5 feet after accounting for 2 feet of freeboard. Based on performance of the previous wastewater treatment ponds, the Discharger estimates that biosolids accumulate at a rate of 0.1 to 0.2 feet per year. The RWD did not propose a sludge removal frequency. Based on an accumulation rate of 0.2 feet per year and the size of the treatment ponds, sludge accumulation will be approximately 10-percent of pond capacity after 7.5 years. Therefore, this Order requires the Discharger to monitor sludge accumulation every 5 years and complete sludge removal within 24 months.

Planned Changes in the Facility and Discharge

18. The Discharger was not able to complete the WWTF improvement project as proposed due to funding limitations. When funding becomes available the Discharger plans to finish the remaining tasks of the project. These include rehabilitating and removing the sludge from Pond 1 so that it can be used as a disposal pond, rehabilitating Pond 6 so that it can be used as a disposal pond, and constructing four

additional unlined treatment ponds, T3, T4, F3, and F4.

19. The Discharger's water balance shows that the addition of disposal Pond 1 will increase the annual average hydraulic disposal capacity by 0.03 mgd and the addition of Pond 6 will increase the disposal capacity by 0.06 mgd. Once both ponds are completed, the total annual average design capacity will be 1.37 MGD. The projected 2020 average monthly wastewater flow is estimated to be 1.052 mgd. This Order requires the submittal of a pond construction report prior to using Ponds 1 and 6 for disposal.

Site-Specific Conditions

20. The Mendota community obtains its potable water supply from groundwater supply wells, which are owned and operated by the Discharger. The original source water wells were constructed on the west side of the San Joaquin River Bypass and were of low quality with high turbidity and poor odor and taste quality. The three source water wells installed in 2004 are located on the east side of the San Joaquin River Bypass and have proven to provide higher quality water. The following table summarizes the average annual water quality data from the source water wells as provided in the RWD.

Constituent	Units	2011	2012	2013	2014
Turbidity	mg/L	n/a	n/a	n/a	0.15 – 0.42
Electrical Conductivity	µmhos/cm	838 – 931	620 – 800	680 – 800	740 – 830
Flow Weighted Electrical Conductivity	µmhos/cm	744	638	670	622
Total Dissolved Solids	mg/L	432 – 554	320 – 463	333 – 494	331 – 475
Chloride	mg/L	65 – 91	59 – 85	63 – 93	62 – 95
Iron	mg/L	ND – 0.05	0.06 – 0.11	0.05 – 0.13	0.07 – 0.15
Manganese	µg/L	0.02 – 0.03	0.02 – 0.03	0.02 – 0.03	0.02 – 0.06

Abbreviations: n/a- = Data not available; ND= non-detected

21. The WWTF is relatively level and as stated in the Discharger's 2006 Preliminary Engineering Report: "Mendota lies on the western slope of the San Joaquin Valley, at an elevation of approximately 170 feet. The closest irregularly formed land is the Coastal Range about 16 miles to the west. From the mountain range a gentle slope beginning at an elevation of about 475 feet extends eastward until the axial center of the valley is reached at the Fresno Slough just east of the City. Unlike the soils throughout most of the western part of Fresno County, the soils within the Mendota area are rather poor for most crops. Most of the soil within the area falls in a class which includes recent alluvial fan and flood plain soils, along with basin rim soils." The Report also states that the soils have a high alkali content that can be termed as "White Alkali", meaning that the sodium present in the soil is predominantly in the form of free salts

22. The 2015 RWD further states that "[v]irtually all the undeveloped area of the WWTF

parcel has a relatively-impermeable [layer] of silty-clays and clays at the surface. This layer varies in thickness from several feet to well over 20 feet. The silty clays are underlain by discontinuous lenses of coarse sand, also of varying thickness. These sands themselves are underlain by thicker clay layers and then alternating layers of sands, silts and clays. The net effect is that ponds located in any of the fine-grained silty-clay layers do not provide substantial percolation rates."

23. Based on the 18 February 2009 FEMA flood insurance map, the WWTF is partially located within the 100-year flood zone with a depth of 2 feet. The WWTF area excluded from the flood zone appears to be the location of the bermed ponds. The RWD provides design plans for each of the ponds that show that the berms are 4.5 to 9.7 feet high. Therefore, the WWTF as constructed after the improvements project is not expected to be within the 100-year flood zone.

24. The average annual precipitation, 100 year return annual precipitation, annual evapotranspiration, and annual pan evaporation for the site is reported to be 8.05 inches, 12.24 inches, 45.75 inches, and 79.22 inches, respectively.

25. Surrounding land use is primarily agricultural. Irrigation water is either supplied by groundwater wells or a network of surface water canals supplied by the San Joaquin River or the Fresno Slough. Agricultural irrigation has a considerable influence on groundwater movement and quality. The types of crops grown and irrigation water quality information were not provided in the RWD.

Groundwater Conditions

26. The Discharger began monitoring groundwater monitoring wells MW-1 through MW-7 in 2002. The Discharger's 2011 *Hydrogeologic Evaluation Report Volume II: Groundwater Characterization* (Groundwater Characterization Report) states: "During installation of […] groundwater monitoring wells [MW-1 through MW-7], the lithology beneath the WWTP was logged. The uppermost soils were comprised of stiff olive gray clay and silty clay from land surface to a depth of seven (7) to eighteen (18) feet below ground surface (bgs). The clay is characterized by large desiccation cracks extending several feet below land surface. Beneath these clay soils, fine to medium grained sands of primarily granitic origin were encountered to completion depths of the monitoring wells at 45 to 60 feet bgs."

27. To better characterize background groundwater, the Discharger expanded the monitoring well network by installing MW-8 through MW-13, which were first monitored in September 2007. In 2007, MW-6 was destroyed because it required retrofit and casing extension. MW-8 was installed as a replacement to MW-6. The monitoring well installation locations are indicated on Attachment B. The Discharger's Groundwater Characterization Report states: "the lithology of the boreholes [logged during] installation of […] groundwater monitoring wells [MW-8 through MW-13] generally confirmed the original findings, including identification of a four to twenty-two foot thick sandy [interval] and/or silty clay cap overlying interbedded lenses of poorly and well graded sands, present to depths of approximately 45 feet bgs."

28. Groundwater monitoring data from 2008 through 2014 indicate that the depth to shallow groundwater ranged from 25.4 to 34.5 feet below ground surface as an annual average. Monitoring data from MW-1 through MW-7 indicated that the groundwater flow direction varied at the site with flow directions trending towards the south during the wet winter/spring and towards the north/northeast during the dry summer/fall monitoring events. The expansion of the monitoring network provided evidence that groundwater flow is more consistently towards a southerly direction, with a localized, seasonal, deviation most notable in the northern portion of the facility and near the Fresno Slough. The observed variation in flow direction is likely attributed in part to seasonal pumping of agricultural water wells located north of the project area, including wells located just north and east of MW-3.

29. From 2010 through 2014 groundwater generally flowed south to southwest with a localized gradient around the wastewater treatment and disposal ponds that flowed east or north east. The horizontal flow gradient ranged from 0.00084 to 0.0037.

30. The Discharger's Groundwater Characterization Report proposed background and compliance groundwater monitoring wells based on major ion chemistry and an analysis of stable isotopes. Groundwater monitoring wells MW-2, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13 were proposed as background monitoring wells and groundwater monitoring wells MW-1, MW-3, MW-4, MW-7, and MW-8 were proposed as compliance monitoring wells. The report presented a statistical analysis of ten constituents: EC, TDS, nitrate as N, boron, arsenic, iron, manganese, sodium, chloride, and sulfate. The analysis results indicated that manganese was the only constituent to statistically exceed background groundwater quality or the associated water quality goal. The statistical exceedance was found in compliance well MW-4.

31. The following table provides a summary of recent groundwater quality based on the background and compliance monitoring wells proposed in the Groundwater Characterization Report.

Constituent	**2014 Yearly Average (Range of Yearly Averages from 2008 through 2013)**	
	Proposed Background [1]	**Proposed Compliance [2]**
Nitrate-N (mg/L)	<0.5 (all years)	<0.5 (all years)
EC (µmhos/cm)	1,950 (1,910 – 2,220)	1,970 (1,890 – 3,350)
TDS (mg/L)	1,320 (1,220 – 1,620)	1,200 (1,320 – 1,700)
Chloride (mg/L)	280 (260 – 320)	280 (320 – 490)
Sulfate (mg/L)	450 (480 – 590)	340 (340 – 500)
Iron (mg/L)	13.0 (11.5 – 17.5)	4.9 (0.7 – 6.5)
Manganese (mg/L)	1.2 (1.1 – 1.4)	0.7 (0.6 – 1.4)

[1] The Groundwater Characterization Report identified MW-2, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13 as background monitoring wells.

[2] The Groundwater Characterization Report identified MW-1, MW-3, MW-4, MW-7, and MW-8 as compliance monitoring wells.

32. Groundwater monitoring data indicate that groundwater quality is highly spatially variable, generally poor, and that any impacts from the WWTF discharge are not

discernible from other factors, such as agricultural impacts to groundwater quality or influence from the Fresno Slough. The above table provides an indication of groundwater quality at the WWTF, however, because of the groundwater flow direction variability, the proposed background monitoring wells are at times downgradient of the discharge and do not provide a consistent representation of background groundwater quality.

33. Due to the variability of the groundwater flow direction, it is not practical to use an interwell analysis approach to define background groundwater quality for each constituent and to determine whether the discharge has caused degradation by comparing compliance well monitoring data to the defined background value. Changes in groundwater quality associated with the discharge will be most discernible using an intrawell analysis approach on compliance wells that are predominately influenced by the discharge.

34. It is appropriate to require groundwater monitoring only for those monitoring wells where impacts from the WWTF discharge or other influential factors are identifiable. From the existing monitoring well network, monitoring wells MW-1, MW-4, MW-5, MW-7, and MW-8 are in locations expected to be representative of potential WWTF discharge impacts to groundwater quality. MW-5 sample data prior to January 2015 represents pre-discharge data prior to disposal to Pond 12.

Basin Plan, Beneficial Uses, and Regulatory Considerations

35. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2015* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to California Water Code section13263(a), waste discharge requirements must implement the Basin Plan.

36. The WWTF is in Detailed Analysis Unit (DAU) No. 235 within the Delta-Mendota Basin hydrologic unit. The Basin Plan designates the beneficial uses of underlying as municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), non-contact water recreation (REC-2), and wildlife habitat (WILD).

37. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

38. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan establishes several salt management requirements, including:

    a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum electrical conductivity (EC) in the discharge

shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.

b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.

39. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.

40. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

41. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.

42. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

43. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 µmhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 µmhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Antidegradation Analysis

44. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:

a. The degradation is consistent with the maximum benefit to the people of the state.

b. The degradation will not unreasonably affect present and anticipated future

beneficial uses.

c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and

d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.

45. Degradation of groundwater by some of the typical waste constituents associated with discharges from a municipal wastewater utility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

46. The Discharger has been monitoring groundwater quality at the site since 2002. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on existing background groundwater quality.

47. Pre-discharge groundwater monitoring data does not exist for this facility and reliable background monitoring wells were not identified within the monitoring well network. Therefore, for the purposes of comparison, monitoring wells MW-9 and MW-10 were identified to have the least impact from the WWTF discharge and provide a reasonable indication of potential background groundwater quality.

48. Constituents of concern that have the potential to degrade groundwater include salts (primarily EC, sodium, and chloride), nutrients, sulfate, manganese, and iron as discussed below.

Constituent	Average Concentrations			
	Effluent	Background Wells [1]	Compliance Wells [2]	Potential Water Quality Objective
EC (µmhos/cm)	1,440 [7]	3,750	2,090	700 [3] to 2,200 [4]
TDS (mg/L)	1,150 [8]	2,610	1,280	450 [3] to 1,500 [4]
Chloride (mg/L)	300 [8]	550	340	106 [3] - 600 [4]
Nitrate as N (mg/L)	7.3 [8]	<0.2	<0.2	10 [5]
Sulfate (mg/L)	250 [8]	1,060	370	250 to 600 [4]
Dissolved Manganese (mg/L)	0.03 [8]	1.4	1.0	0.050 [6]
Dissolved Iron (mg/L)	0.34 [8]	12.0	5.4	0.300 [6]

[1] MW-9 and MW-10 were determined to provide the best approximation of background groundwater quality. Average concentrations calculated by grouping quarterly data collected from 2007 through 2014.

[2] Compiled from MW-1, MW-4, MW-5, MW-7, and MW-8 data collected 2007 through 2014.
[3] Lowest agricultural water quality goal.
[4] Short-term Secondary Maximum Contaminant Level.
[5] Primary Maximum Contaminant Level.
[6] Secondary Maximum Contaminant Level.
[7] Effluent data from facultative ponds collected weekly from January 2013 through October 2015.
[8] Disposal Pond 10 data collected quarterly from 2012 through 3rd quarter 2014.

a. **Salinity (EC, TDS, and chloride).** The average EC and TDS concentration in the background wells substantially exceed the respective short-term Secondary Maximum Contaminant Level (MCL) water quality objectives. The average background chloride concentration nearly exceeds the upper level of the potential water quality objective range, which is set at the short-term Secondary MCL.

For all three salinity constituents, the average background concentration exceeds the average effluent and compliance well salinity concentrations. The annual average background and compliance well salinity concentrations have remained relatively stable since 2008, while the annual average effluent EC concentration has decreased from 2,440 µmhos/cm in 2009 to 1,180 µmhos/cm in 2015. Therefore, the effluent quality does not appear to pose a threat of further degrading groundwater quality.

Despite the Discharger's efforts to improve effluent quality, the discharge has not been able to meet the Basin Plan maximum effluent limit for EC of 1,000 µmhos/cm. The Discharger submitted an application, dated 10 May 2016, for an exception from water quality objectives related to salinity pursuant to Chapter IV, *Exception to Discharge Requirements Related to the Implementation of Water Quality Objectives for Salinity*, paragraph 8 of the Basin Plan. The application provided justification as to why the exception would be necessary, a description of salinity reduction measures that the Discharger has undertaken, and an evaluation of whether water conservation has had an impact on effluent salinity. The Discharger has committed to becoming a member of the Central Valley Clean Water Association (CVCWA), and will thus satisfy the requirement in Resolution R5-2014-0074 requiring active participation in the Central Valley Salinity Alternative for Long-term Sustainability (CV-SALTS) program to qualify for an exception.[1] Therefore, this Order grants a 10-year exception to the EC limit specified in the Basin Plan, and establishes an interim performance-based EC effluent limit. Pursuant to the exception requirements, the Discharger is expected to participate in CV-SALTS' evaluation of potential Basin Plan amendments related to the establishment of salinity management plans for the Central Valley region.

A performance-based EC effluent limit was determined using effluent sample data from January 2011 through October 2015 (230 samples). To simulate the variability of future annual averages from monthly sampling, twelve random samples were picked from the 230 samples to calculate a random annual average.

[1] Should the Discharger fail to actively participate in CV-SALTS at any point while this permit is in effect, the Board may reopen and reconsider the applicability of Basin Plan salinity limitations that would otherwise be applicable to this discharge.

Random sampling was repeated 50,000 times to create a normal distribution of potential future annual averages. The value corresponding to the 99th percentile of the normal distribution was chosen as the limit. Therefore, as long as the effluent EC concentration does not significantly increase, 99% of all future annual averages will be below the limit. This method uses a nonparametric approach to determine the 99% one-sided upper prediction limit of the mean that has an order of twelve.

b. **Nitrate.** For nutrients such as nitrate, the potential for degradation depends not only on the quality of the treated effluent, but the ability of the vadose zone below the effluent disposal ponds to provide an environment conducive to nitrification and denitrification to convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The effluent nitrate nitrogen concentration, as indicated from samples from Pond 10, averaged 7.3 mg/L and the groundwater concentration in the background and compliance wells are essentially non-detectable. The nitrate effluent quality of the newly constructed WWTF is expected to remain the same. Therefore, the discharge is not likely to degrade groundwater quality and nitrate effluent limit is not required to protect groundwater quality.

c. **Sulfate.** The average concentration of sulfate in the effluent (250 mg/L) is less than the compliance monitoring wells (370 mg/L), which is less than the background monitoring wells (1,060 mg/L) and the short-term Secondary Maximum Contaminant Level of 600 mg/L. Therefore, sulfate is not considered to be a constituent of concern that has the potential to cause groundwater degradation.

d. **Iron and Manganese.** For both constituents, the average dissolved concentration in the compliance wells is less than the background wells and greater than the Secondary Maximum Contaminant Level. Because the dissolved concentrations in background groundwater exceed water quality objectives, the Basin Plan's Controllable Factors Policy is applicable. The Controllable Factors Policy does not allow controllable factors, such as a discharge of waste, to cause further degradation of water quality where other uncontrollable factors have already caused exceedance of a water quality objective.

While the biosolids in the decommissioned treatment ponds Pond 2 and Pond 3 were removed in 2015, the remaining biosolids in Pond 1 have the potential to contribute to reducing conditions that may mobilize iron and manganese. This Order prohibits any further degradation of groundwater quality in compliance with the Controllable Factors Policy and requires the Discharger to submit a workplan that proposes a schedule to remove the sludge from Pond 1.

49. This Order establishes effluent and groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

For EC, TDS, chloride, nitrate, sulfate, iron, and manganese**,** current groundwater monitoring data indicates that groundwater has not been degraded beyond background groundwater quality by the previous discharge and that the expanded

discharge does not pose a threat of degradation in the future. The requirements of this Order do not allow any degradation to occur.

50. The Discharger provides treatment and control of the discharge that has incorporated:

    a. Installing new municipal supply wells that provide source water better quality and reduce salinity and hardness ;

    b. Conducting a resident outreach salinity education program;

    c. Repairing of old manholes potentially subject to upward groundwater intrusion;

    d. Decommissioning the old treatment ponds;

    e. Constructing new wastewater treatment ponds that improve treatment capacity and efficiency; and

    f. Constructing new disposal ponds in an attempt to improve percolation rates and disposal capacity.

    Although the Discharger has implemented several salinity reduction measures, the Discharger's salinity management plan has not been submitted. Therefore, this Order requires the Discharger to submit a *Salinity Management Plan*. These efforts are considered best practicable treatment or control at this time.

Other Regulatory Considerations

51. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

52. Based on the threat and complexity of the discharge, the facility is determined to be classified as 3B as defined below:

    a. Category 3 threat to water quality: "Those discharges of waste that could degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2."

    b. Category B complexity, defined as: "Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."

53. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> (a) Sewage - Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.
>
> (b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
>
> (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
>
> (2) the discharge is in compliance with the applicable water quality control plan; and
>
> (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

54. The discharge authorized herein (except for the discharge of residual sludge and solid waste), and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:
    a. Treatment ponds T1, T2, F1, and F2 are exempt pursuant to Title 27, section 20090(a) because they are treatment and storage facilities associated with a municipal domestic wastewater treatment plant.
    b. Pond 1 through Pond 12 are exempt pursuant to Title 27, section 20090(b) because they are wastewater percolation ponds and:
        i. The Central Valley Water Board is issuing WDRs.
        ii. The discharge is in compliance with the Basin Plan, and;
        iii. The treated effluent discharged to the ponds does not need to be managed as hazardous waste.

55. The U.S. EPA published *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (hereafter "Unified Guidance") in 2009. As stated in the Unified Guidance, the document:

> …is tailored to the context of the RCRA groundwater monitoring regulations …
>
> [however, t]here are enough commonalities with other regulatory groundwater monitoring programs … to allow for more general use of the tests and methods in the Unified Guidance… Groundwater detection monitoring involves either a comparison between different monitoring stations … or a contrast between past

> and present data within a given station… The Unified Guidance also details methods to compare background data against measurements from regulatory compliance points … [as well as] techniques for comparing datasets against fixed numerical standards … [such as those] encountered in many regulatory programs.

The statistical data analysis methods in the Unified Guidance are appropriate for determining whether the discharge complies with Groundwater Limitations of this Order.

56. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment facility has a design capacity of more than 1.0 MGD, but all storm water from the WWTF is collected and disposed of onsite. The Discharger is therefore not required to obtain coverage under NPDES General Permit CAS000001.

57. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems General Order 2006-0003-DWQ (the General Order). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with the Order. The Discharger's collection system exceeds one mile in length and the Discharger is enrolled under the General Order.

58. Water Code section 13267(b)(1) states:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached Monitoring and Reporting Program __ are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

59. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

60. A Mitigated Negative Declaration was certified by the City of Mendota on 11 December 2007 in accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Mitigated Negative Declaration describes the project as the expansion of the existing WWTP to include headwork's, pump station, 30 inch sewer interceptor pipeline, effluent disposal ponds, oxidation treatment lagoons, facultative treatment lagoons, and renovation of the existing treatment plant.

61. The Mitigated Negative Declaration evaluated the potential impacts to groundwater quality and found that the discharge will not have an impact to water quality. Compliance with this Order will avoid impacts to water quality.

62. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge,* which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.

63. The Central Valley Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.

64. The Central Valley Water Board finds that the Discharger will satisfy the requirements of Resolution R5-2014-0074, justifying a Limited-Term Exception from Basin Plan Provisions and Water Quality Objectives for Groundwater related to salinity constituents.

65. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

66. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

67. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

68. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that WDR Order 91-192 and CDO R5-2002-0048 are rescinded except for purposes of enforcement. Pursuant to Water Code sections 13263 and 13267,

the City of Mendota, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Discharge of hazardous wastes, as that term is defined in California Code of Regulations, title 22, section 66261.1 *et seq*., is prohibited.

3. Bypass around, or overflow from, the wastewater treatment pond(s) is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.

4. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.

5. The Discharger shall not allow toxic substances to be discharged into the wastewater treatment system such that biological treatment mechanisms are disrupted.

B. Flow Limitations

1. **Effectively immediately**, influent flows to the WWTF shall not exceed the following limits:

Influent Flow Measurement	Flow Limit
Total Annual Flow [1]	468 MG
Average Dry Weather Flow [2]	1.28 MGD

[1] As determined by the total flow for the calendar year.

[2] As determined by the total flow for the months of August through October, inclusive, divided by 92 days.

2. **Effective on the date of Executive Officer approval** of each successive *Wastewater Treatment Disposal Pond Completion Report* submitted pursuant to Provision G.1.f, influent flows shall not exceed the specified limits as indicated in the following table. Approval is dependent on submittal of a water balance capacity analysis demonstrating that the as-built hydraulic capacity of the WWTF is consistent with the flow limits.

	Flow Limit		
Influent Flow Measurement	**Pond 3 Completion**	**Pond 6 Completion**	**Pond 3 & 6 Completion**
Total Annual Flow [1]	489 MG	478 MG	499 MG
Average Dry Weather Flow [2]	1.34 MGD	1.31 MGD	1.37 MGD

[1] As determined by the total flow for the calendar year.

[2] As determined by the total flow for the months of August through October, inclusive, divided by 92 days.

C. Effluent Limitations

1. **Effective immediately**, effluent discharged to the disposal evaporation and percolation ponds shall not exceed the following limits:

Constituent	**Units**	**Limit**	**Basis of Compliance Determination**
BOD_5 [1]	mg/L	40	Monthly average
BOD_5 [1]	mg/L	80	Monthly maximum
Electrical Conductivity	µmhos/cm	1,680	Flow Weighted Annual Average

[1] 5-day biochemical oxygen demand at 20˚C.

2. **Effective 1 July 2026**, effluent discharged to the disposal evaporation and percolation ponds shall not exceed the following limits:

Constituent	**Units**	**Limit**	**Basis of Compliance Determination**
BOD_5 [1]	mg/L	40	Monthly average
BOD_5 [1]	mg/L	80	Monthly maximum
Electrical Conductivity	µmhos/cm	Basin Plan [2]	Annual Average [3]

[1] 5-day biochemical oxygen demand at 20˚C.

[2] As specified in the most current revision of the Basin Plan.

[3] Compliance shall be based on the flow weighted annual average unless otherwise specified in the Basin Plan.

D. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.

2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

3. The discharge shall remain within the permitted waste treatment/containment structures.

4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. Public contact with wastewater at the WWTF shall be prevented through such means as fences, signs, or acceptable alternatives.

7. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.

8. As a means of discerning compliance with Discharge Specification D.7, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

9. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

10. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

11. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications D.9 and D.10.

12. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

    d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

13. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

14. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 10.0.

15. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years **beginning in 2020**, and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds ten percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 24 months after the date of the estimate.

E. Groundwater Limitations

Release of waste constituents from any portion of the WWTF shall not cause groundwater to:

1. Contain constituents in concentrations statistically greater than current background groundwater quality or that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, whichever is greater.
2. Exceed a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.
3. Exceed nitrate (as nitrogen) concentrations of 10 mg/L.
4. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

Compliance with these limitations shall be determined annually as specified in the Monitoring and Reporting Program using approved statistical methods.

F. Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations .

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.

2. Any handling and storage of residual sludge, solid waste, and biosolids at the WWTF shall be temporary (i.e., no longer than six months) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.

3. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

4. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board except in cases where a local (e.g., county) program has been authorized by a regional water board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order 2004-12-DWQ, “General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities”). For a biosolids use project to be covered by Order 2004-12-DWQ, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

5. Use and disposal of biosolids shall comply with the self-implementing federal regulations of 40 Code of Federal Regulations part 503, which are subject to enforcement by the U.S. EPA, not the Central Valley Water Board. If during the life of this Order, the State accepts primacy for implementation of part 503, the Central Valley Water Board may also initiate enforcement where appropriate.

6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

G. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision G.4:

   a. By **1 October 2016**, the Discharger shall submit a *Pond Construction Report* for Pond 12. The report shall include final as-built dimensions including pond width, length, depth, freeboard, berm height, berm slope, and volume capacity.

   b. By **1 October 2016**, the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The Plan shall propose and justify the values to be used to determine "current groundwater quality" (as defined in Groundwater Limitations E.1) for each of the compliance wells listed in the Monitoring and Reporting Program (MRP). In addition, the plan shall propose and justify the statistical methods that will be used to evaluate compliance with the Groundwater Limitation of this Order for the compliance wells and constituents specified in the MRP. Compliance shall be determined using appropriate statistical methods that have been selected based on site-specific information and the U.S. EPA Unified Guidance document cited in Finding 55 of this Order. The report shall explain and justify the selection of the appropriate statistical methods.

   c. By **1 November 2016**, the Discharger shall submit a *Pond Retrofit Workplan* for Pond 1 and Pond 6. The workplan shall provide a schedule to remove sludge from Pond 1 prior to 1 January 2019. The workplan shall also include planned dimensions for each pond and describe the necessary work to be completed so that Pond 1 and Pond 6 will be fully functional and ready to receive wastewater in compliance with the requirements of this Order.

   d. By **1 July 2017**, the Discharger shall submit a *Salinity Management Plan* that describes completed and planned salinity minimization efforts. At a minimum, the plan shall meet the following requirements outlined in Water Code Section 13263.3(d)(3):

      i. An estimate of all of the sources of pollutants contributing, or potentially contributing, to the loadings of salinity in the treatment plant influent including water supply, water softeners, and other residential, commercial and industrial salinity sources.

      ii. An analysis of the methods that have been or could be used to prevent the discharge of salinity into the facility, including prohibiting the installation of new self-regenerating residential water softeners, application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the facility. The analysis shall also identify sources, or potential sources, not within the ability or authority of the Discharger to control.

      iii. An estimate of salinity load reductions that may be identified through the methods identified in Water Code Section 13263.3(d)(3)(ii).

iv. A plan for monitoring the results of the salinity pollution prevention program.

v. A description of the tasks, costs, and time that have been required or will be required to investigate and implement various elements in the salinity pollution prevention plan.

vi. A statement of the Discharger's salinity pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.

vii. A description of the Discharger's existing salinity pollution prevention programs.

viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.

ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

x. Progress to date in reducing the concentration and/or mass of salinity in the discharge.

Implementation progress of the plan shall be reported each year in the Annual Monitoring Report required pursuant to Monitoring and Reporting Program __.

e. By **1 February 2019**, the Discharger shall submit a *Sludge Removal Report* for Pond 1. The report shall describe implementation of the approved workplan, provide results of any analyses performed to characterize soil/sludge removed from the pond, and describe the fate of the removed materials. If the work deviates from the approved workplan, the report shall explain and justify the deviations.

f. **Upon completion** of retrofitting Pond 1 or Pond 6 **and at least 120 days prior** to 1) discharging to either pond, and 2) increasing influent flow, the Discharger shall submit a *Wastewater Disposal Pond Construction and Completion* report. If discharge to the ponds will begin at the same time, then only one report describing both ponds needs to be submitted. The reports shall certify that pond construction is complete, fully functional, and ready to receive wastewater in compliance with the requirements of this Order. The report shall include final as-built dimensions including pond width, length, depth, freeboard, berm height, berm slope, and volume capacity. The report shall include a water balance model that provides the following hydraulic capacity information:

i. Average daily dry weather flow for the months of July through September, inclusive;

ii. Maximum monthly average flow based on a reasonable allowance for sewer system I/I during the 100-year, 365-day precipitation event;

iii. Total annual flow volume; and

include documentation of, and technical support for, all data inputs used with consideration of at least the following:

iv. The as-built geometry of all ponds;

v. A minimum of two feet of freeboard in each pond at all times;

vi. Historical local pan evaporation data (monthly average values) used to estimate pond evaporation rates;

vii. Local precipitation data (for the 100-year 365-day event distributed in accordance with mean monthly precipitation patterns) applied as direct precipitation onto all ponds;

viii. Proposed wastewater generation rates based on historical flows and any new developments distributed monthly in accordance with expected seasonal variations;

ix. Estimated I/I flows for the 100-year 365-day event based on historical flows, new development, and age and type of sewer pipes; and

x. Projected long-term percolation rates of the ponds including consideration of solids plugging effects of solids plugging on all ponds.

2. At least **180 days** prior to any sludge removal and disposal, the Discharger shall submit a *Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried biosolids will be removed from the site prior to the onset of the rainy season **(1 October)**. If the Discharger proposes to land apply biosolids at the effluent recycling site, the report shall include a Report of Waste Discharge and filing fee to apply for separate waste discharge requirements.

3. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by **31 January**.

4. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly

stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

5. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer, and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.

6. The Discharger shall comply with Monitoring and Reporting Program __, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

7. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

9. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

10. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.

11. The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23, division 3, chapter 26.

12. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

13. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

14. The Discharger shall comply with the requirements of the Statewide General Waste Discharge Requirements (General WDRs) for Sanitary Sewer Systems (Water Quality Order 2006-0003), the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC), and any subsequent revisions thereto. Water Quality Order 2006-0003 and Order 2008-0002-EXEC require the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.

15. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

16. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

17. In the event of any change in control or ownership of the WWTF, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

18. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water

Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

19. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

20. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on __

_____

PAMELA C. CREEDON, Executive Officer